

From Richard Pyle <deepreef@bishopmuseum.org>

Sent Friday, October 15, 2010 4:41 pm

To hihwmanagementplan@noaa.gov

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Subject Mesophotic Coral Ecosystems

To Whom it May Concern:

I have been exploring and studying coral-reef ecosystems at depth of 50-150 meters for more than two decades, both within Hawaii and elsewhere throughout the tropical Pacific. For the past several years, I have served as Lead-PI on a major NOAA funded project to characterize these Mesophotic Coral Ecosystems (MCEs) off south-western Maui, in the Auau Channel. Through the efforts of that project and others, we have begun to understand just how rich, complex, and important these ecosystems are. Historically, most marine biologists assumed that complex coral ecosystems did not exist much below about 50 meters. However, we have found expansive regions of near-100% coral cover at depths of 50-100 meters, and the presence of hermatypic, zooxanthellate corals below 120 meters. Some of the fish populations on these MCEs are among the highest in terms of biomass of any reef environments that I've ever seen anywhere in the main Hawaiian Islands.

Although we are still learning the full extent and dynamics of these MCEs in Hawaii, we already know enough to recognize their vital importance to the overall marine ecosystems in Hawaii. I often worry that, because few people know they even exist, (let alone how we may be impacting them), these reefs may suffer the effects of anthropogenic influences before we even realize the extent of their importance. We already have reason to believe that they are within the domain of Humpback Whale activities: on at least one ROV survey off west Maui, the sonar from the ROV revealed a whale (undoubtedly a Humpback) nearby.

I therefore would like to urge you to consider including these ecosystems as an important part of the Hawaiian Islands Humpback Whale National Marine Sanctuary Management Plan.

If there is any additional information I can provide, please don't hesitate to contact me.

Aloha,

Richard L. Pyle, PhD
Database Coordinator for Natural Sciences
Associate Zoologist in Ichthyology
Dive Safety Officer
Department of Natural Sciences, Bishop Museum

[REDACTED]
email: deepreef@bishopmuseum.org
<http://hbs.bishopmuseum.org/staff/pylerichard.html>